

ANTIREFLECTIVE HARDMASK AND USES THEREOF

Abstract of the Disclosure

Antireflective hardmask compositions and techniques for the use of antireflective hardmask compositions for processing of semiconductor devices are provided. In one
5 aspect of the invention, an antireflective hardmask layer for lithography is provided. The antireflective hardmask layer comprises a carbosilane polymer backbone comprising at least one chromophore moiety and at least one transparent moiety; and a crosslinking component. In another aspect of the invention, a method for processing a semiconductor device is provided. The method comprises the steps of: providing a material layer on a
10 substrate; forming an antireflective hardmask layer over the material layer. The antireflective hardmask layer comprises a carbosilane polymer backbone comprising at least one chromophore moiety and at least one transparent moiety; and a crosslinking component.